MEASUREMENT OF IMMEDIATE GAIN IN KNOWLEDGE AND LONG TERM CHANGE OF BEHAVIOR AFTER ATTENDING AN ENHANCED CASE MANAGEMENT WORKSHOP

by

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ABSTRACT

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The Department of Workforce Development in the State of Wisconsin has initiated a mandate that all Wisconsin Works employees complete a minimum of 24 contact hours of training per year. The training can be divided into 12 contact hours of professional development and 12 contact hours of personal development. The Center for Career Development and Employability Training (CCDET) has a contract with the State of Wisconsin Department of Workforce Development to provide professional training for Wisconsin Works employees. CCDET continuously develops enhanced case management training courses that are appropriate to the skills needed by Wisconsin Works (W-2) employees. Examples of training topics include: How to best understand and help W-2 customers with Mental Health Awareness; AODA Issues; Learning Disabilities; Domestic Violence; and Teen Parenting.

Unfortunately, there has not been any measurement done to assess the effectiveness of these training courses to determine whether the mandated professional development has any long-term effect on how the Wisconsin Works employees interact with customers who have any of the above issues as barriers to successful employment.

This study will assess the gain in immediate knowledge from the specific training sessions by conducting a pre-training Likert scale self-evaluation based on the participant's preconceived understanding of the topic and a post training self-evaluation using the same questions to determine their increase in understanding and knowledge. To measure whether the specific training topics have any long term effect on the participants in either their handling of customers with any of the above issues or their advocacy for them, an anonymous survey to be completed by the workshop participants will be sent to them one month following their training. This study will examine those training sessions that are entitled: Mental Health Awareness.

Donald Kirkpatrick's Four Levels of Evaluation will be used to evaluate the results of the self-evaluations to determine the effectiveness of the training at the immediate level (Kirkpatrick Level II) and also long term transfer of knowledge (Kirkpatrick Level III). The Department of Workforce Development will be able to use the results of both evaluations to address more effectively the needs of their workers and the customers they serve.

Table of Contents

List of Tables

Chapter 1

Introduction

Overview of Current Enhanced Case Management Training

The State of Wisconsin Department of Workforce Development (DWD) oversees the Bureau of Partner Services (BPS) Training Section within the Division of Workforce Solutions (DWS). The Department of Workforce Development has contracted with the University of Wisconsin Oshkosh Center for Career Development and Employability Training since 1993 to provide both technical/policy and Enhanced Case Management training development and delivery in order to meet their training needs and the mandated requirements of the Wisconsin Welfare to Work (W-2) program. The Center for Career Development and Employability Training (CCDET) may contract with other agencies each year based upon customer satisfaction.

The decision of when to offer the current various Enhanced Case Management (ECM) and Interpersonal Skills (IS) workshops is made by CCDET Enhanced Case Management coordinators based on the degree of saturation and attendance within a previous year. This decision is also based upon the availability of trainers well versed in that topic and Registar (enrollment) information. The majority of the topics chosen for training are dictated by the shape of the welfare system in Wisconsin. The primary reason for changing Enhanced Case Management or Interpersonal Skill workshop topics is that more of the case load is comprised of individuals with very specific "barriers to employment."

New training topics are developed by CCDET or one of their sub-contracted agencies for the Division of Workforce Solutions on an as-needed basis. The need is demonstrated from a variety of sources: influence of advocacy groups, input from field and state staff, and needs assessments. A team, comprised of curriculum writers, subject matter experts, policy experts and a CCDET coordinator collaborates on concept, content, goals and objectives. The curriculum writer synthesizes current research, develops appropriate activities to enhance learning, formats the training session and submits it to reviewers and editors according to a Project Management tool developed by DWD/DWS/BPS.

Statement of the Problem

The Division of Workforce Solutions annually requires their personnel to complete 24 hours of professional and personal development. Twelve of these hours must be in the professional development area. There has been no evaluation of the effectiveness of the ECM training and its impact upon how the participant's attitudes toward their customers may have been changed as a result of this training.

For the purpose of this study, one of the professional development ECM course offerings, Mental Health Awareness, will be evaluated for its immediate gain in knowledge and its long-term effect on how the Division of Workforce Solution employees who attend the workshop may change their understanding of and behavior toward their customers with a mental health issue.

Research Objectives

To determine the benefit that Wisconsin Welfare to Work (W-2) customers will receive from the professional development required by the Division of Workforce Solutions, it is necessary to show a gain in knowledge and understanding of the issues which the customers may possess by workshop participants and to demonstrate a positive change in the worker attitudes and treatment of such customers.

In this study, we will assess the results of the study according to only Level II and Level III of Kirkpatrick's Four Levels of Evaluation (Kirkpatrick, 1998) in relation to participants who have attended the Mental Health Awareness workshop.

Therefore, the research objectives of this study are as follows:

1. To determine the participant understanding of Mental Health Issues before the training, Kirkpatrick Level II.
2. To determine the participant understanding of Mental Health Issues immediately after the training, Kirkpatrick Level II.
3. To measure the long-term effects of the knowledge gained during the training one month after the participants have attended the training, Kirkpatrick Level III.

Need for the Study

In order for the Division of Workforce Solutions to demonstrate the need and effectiveness of the professional development programs it offers its employees, a study of this type is necessary. With Social Service organizations and Wisconsin Welfare to Work (W-2) coming under scrutiny to prove their effectiveness in the competitive

monetary arena, it is essential for them to demonstrate concrete evidence of their benefit to social service customers in the State of Wisconsin.

By matching internal marketing programs (ECM and IS training) with their external marketing (effectively servicing W-2 customers), the Division of Workforce Solutions proves their commitment to developing their employees. This employee development in turn should lead to an employee willingness to exert additional efforts to achieve the goals of W-2 (Iverson, McLeod & Erwin, 1996).

The two-day Mental Health Issues and later developed one-day Mental Health Awareness Enhanced Case Management workshops have been in existence since the inception of the Wisconsin Welfare to Work program on September 1, 1997. The course content of the Mental Health Awareness workshop is for participants to develop a basic understanding of people with mental health issues:

- How mental health issues affect the customer's contacts with the case manager.
- How to relate better to the customer
- How mental health issues affect employment
- Ways to build effective relationships with resources

(DWD Quarterly Training Preview, 2001)

Research Model

A self-assessment pre-training and post-training survey instrument was developed using statements concerning individual knowledge and attitudes about mental health issues that are already contained in the workshop training materials. The statements were

intended to be used by the program presenter to help participants determine whether the statements were considered realistic or not. In previous training sessions, the trainer would pose the statement to generate participant discussion and use the discussion as an opportunity to educate the participants with further data. The statements were taken in part from Cornell University's publication: Implementing the Americans with Disabilities Act: Reasonable Accommodations (Mental Health Awareness Trainer's Guide, Sept. 1, 2001). The results of each statement in the pre-and post-training self-assessment survey instrument were designed to be indicative of whether there was an immediate gain in knowledge (Kirkpatrick Level II), thus providing data to support evaluation. It is a common practice for trainers to use end-of-workshop evaluations to assess how well the participants understood the material presented and to remind the participants of the important learning points (Cohen, 1999).

The one month follow-up Mental Health Awareness post-training self-assessment survey instrument was used to evaluate the effectiveness of the training on the job (Kirkpatrick Level III). One of the research goals was to identify whether the Enhanced Case Management professional development workshops, in this case, Mental Health Awareness, had any impact on the participants' job performance with a better understanding of mental health issues so they could better service their customers. The survey instrument was also designed to evaluate whether the workshop prompted participants to continue their individual learning concerning mental health issues, become an advocate for customers with mental health issues, or encourage them to become an advocate for further training in their agency. This behavior would show a deeper

organizational commitment by demonstrating that the workshop participants would be willing to step beyond their traditional functional boundaries to add to the external service offered by W-2 (Iverson, McLeod & Erwin).

Demographics were included in both the initial pre-training survey instrument and the one-month post assessment survey instrument to enable an evaluation of the participants in relation to the survey statements.

Definition of Terms:

For clarity of understanding the following terms are defined as follows:

1. Department of Workforce Development (DWD) – a state agency charged with the building and strengthening Wisconsin's workforce by providing job services, training and employment assistance to people looking for work, as well as finding the necessary workers to fill current job openings (www.dwd.state.wi.us.).
2. Division of Workforce Solutions (DWS) – develops and maintains employment-focused programs in an effort to ensure Wisconsin continues to be a leader in the post-welfare reform era (www.dwd.state.wi.us/dws/).
3. Bureau of Partner Services (BPS) – a state leader and a national model for providing workforce development and human services training to professionals whose ultimate goal is to promote self-sufficiency and wellness in Wisconsin families (www.dwd.state.wi.us/destrain/trainsec/).
4. Wisconsin Welfare to Work (W-2) – established by the Balanced Budget Act of 1997 to assist the hardest-to-employ welfare recipients and non-

custodial parents who face great challenges to employment, to move into unsubsidized jobs and economic self-sufficiency (replaced the previous Aid for Families with Dependant Children (AFDC) program) (www.dwd.state.wi.us/wtw/).

5. Center for Career Development and Employability Training (CCDET) – an outreach program of the University of Wisconsin Oshkosh College of Education and Human Services. CCDET is a subcontracted agency for the State of Wisconsin Department of Workforce Development to provide training workshops (www.uwosh.edu/ccdet/).
6. Mental Health Illness – characterized by disordered thinking, emotional disturbances and perceptual difficulties in persons with one of the following major categories: mood disorders, anxiety disorders, personality disorders or schizophrenic disorders (Mental Health Awareness Trainer Guide 2001, CCDET).
7. Enhanced Case Management Workshop – specific training related to developing empathy for the difficult to place customer in the W-2 system (www.uwosh.edu/ccdet/projects.htm).
8. Interpersonal Skills Workshop – training topics dealing with self improvement (www.uwosh.edu/ccdet/projects.htm).
9. Crosstabulation – usually a table of frequencies of two or more categorical variables taken together (George & Mallery, 2001).

10. Pearson Chi-Square analysis – used as a goodness-of-fit for structural models answering whether the actual data differ significantly from results predicted (George & Mallery, 2001).
11. T-Tests – determines the likelihood that a particular correlation is statistically significant (George & Mallery, 2001).
12. Significance – a measure of the rarity of a particular statistical outcome given that there is actually no effect. A significance of $P<0.05$ is the most widely accepted value by which researchers accept a certain result as statistically significant. It means that there is less than a 5% chance that the given outcome could have occurred by chance (George & Mallery, 2001).

Limitations of the Study:

There are five limitations in this study.

1. The results of the study are limited to only one ECM workshop, Mental Health Awareness, delivered by CCDET during the first quarter of the 2002 fiscal year.
2. The enthusiasm of the participant response could be greatly affected by how the various workshop trainers present the course materials and the importance of the survey instruments.
3. The number and location of the workshops in the State of Wisconsin may have some bearing on the results as Milwaukee County has 82% of the W-2 serviced population.

4. The number of workshop participants who will have contact with customers with a mental illness may be limited.
5. The individual job-site supervisors may influence the policy and procedure that the workshop participants have to follow upon returning to their respective job-sites, thus limiting the use of the knowledge gained.

Chapter II:

Review of Literature

Introduction

The ability to assess learning in the real world requires a model that can be effectively utilized in all areas of training. Such a model was developed by Donald Kirkpatrick for his Doctoral thesis at the University of Wisconsin Madison in 1959. In November of 1959 through February 1960, Kirkpatrick (1960b) wrote a series of four articles which were published for the *Journal for the American Society for Training Directors.* These articles have become the model of evaluation that has been the most reviewed and applied guide to assessing the effectiveness of training in the world of work. According to the four-level model he presented, one should always begin with level one and move sequentially through levels two, three and four. Information from each prior level serves as a basis for the next level's evaluation leading to a more precise measure of the training program. Kirkpatrick is a Professor Emeritus at the University of Wisconsin Madison and has over 30 years of experience as a professor of management at the University.

Kirkpatrick's Four Levels of Evaluation

Developed as his doctoral thesis, Kirkpatrick's Four Levels of Evaluation are:

Level I. Reaction

Level II. Learning

Level III. Behavior

Level IV. Results

Reaction or Level I is described by Kirkpatrick (1966, pp. 54-60) as, "how participants feel about various aspects of a training program." Basically, do they have positive feelings about the instructor, the material, the location and the experience itself? The idea being that if the participants do not have a positive experience they will not attain the fullest benefit from the training and not support it to others. According to Kirkpatrick (1996) if an individual does not like a program, "there's little chance they'll put forth an effort to learn." An environment that is pleasant and an experience that is enjoyed, leads to a learner that is willing and more receptive.

Kirkpatrick (1971) notes that at this initial level of evaluation, one is not attempting to measure any degree of learning and the generally used measure of assessment is a "smile sheet" where participants rate their experience. According to Kirkpatrick, every program should at least be evaluated at this level to provide for improvement of the training program.

The second level of evaluation, commonly referred to as Level II, is learning. Kirkpatrick (1966, pp. 54-60) describes this level as the measure of "knowledge acquired, skills improved, or attitudes changed due to the training." He is careful to note that most training programs result in some measurable gain in one or more of these three areas. The training may lead to an increase in knowledge of concepts, development of a skill or slight change in attitude toward the topic being trained. Level II is generally measured by doing a pre- and post-assessment of the material contained in the training. However, as Kirkpatrick (1971) has discussed, knowledge, skills or attitudinal change is not the sole goal of training. Trainers may also assess this level with a criterion-referenced test. The

criteria are the objectives for the training which were developed before the training course is offered.

Level III or behavior is described by Kirkpatrick as a determination of whether participants who had completed the training actually used their new knowledge, principles or techniques on the job. He describes it as a "measure of the extent to which participants change their on-the-job behavior because of training." (Kirkpatrick, 1996, pp. 54-60).

Kirkpatrick (1971) gives five general guidelines for measuring behavior change after training that can be readily adapted for assessing behavioral change on the job.

1. A clear and systematic assessment of the behavior of the participants prior to, as well as after, the training experience.
2. Appraisal of the performance of the participant by someone familiar with him/her before and after the training. This could be a supervisor or close work associate.
3. A comparison of the pre- and post-appraisals of performance or behavior using a a statistical analysis. Such an analysis would prove that the behavioral change is statistically significant and therefore be far more useful.
4. Performance or behavior change is assessed after some time has passed, preferably no longer than three months. This is suggested so that the training participants would have an opportunity to practice what they had learned.
5. Use of a control group not receiving the training and comparing the difference between those groups that received the training and those who did not.

Kirkpatrick (1960b) identifies his last level of evaluation as a measure of the final results that occur as a result of training (Level IV). Some examples of these results could be improved productivity, lowered absenteeism and turnover, higher quality or reduced costs. After six months or more, evaluators might have difficulty solely attributing changed business results to training alone. These are fine measures for an industrial or production setting but not particularly for training programs that deal with non-technical or soft skills. The final results in these trainings may possibly be measured in terms of improved morale, greater customer satisfaction or other nonfinancial terms.

Need for Evaluation of Training

In an ASTD Virtual Community online article, Abernathy (2001, p.1) clearly demonstrates the need for evaluation by deferring to humorist Scott Adams:

> *Dilbert* creator Scott Adams describes a tongue-in-cheek scenario on the value of training: "Dilbert's Boss would use the training department to hide funds that could be cut during the next budget adjustment. You can always cut training and be safe in assuming that no direct negative impact will show up for a few months.

It is difficult to prove the need for training and evaluation along with their benefits for a company or organization, but that is exactly what is necessary to prevent training from becoming the first line item cut from the budget. When you talk of training evaluation, the first model that comes to mind is Kirkpatrick's.

According to the *News You Can Use* section (Training and Development, August 2002), the consulting firm Birkby Lancaster surveyed best-practice companies in the United Kingdom and found that they spend more money, almost three percent of salary, on employee training and development. Failure of companies to include training can lead to poor staff morale and a lack of productivity. Further, many companies fail to evaluate their training efforts. You need to have feedback from staff and supervisors in the form of evaluation to project a company/organization into the future (Richardson, 1998). Continuous improvement of training requires continuous measurement of all aspects of the process of helping employees learn and change. Evaluation means determining the extent of the impact of training.

In a study for the *Australian and New Zealand Journal of Psychiatry*, Lambert and Gournay (1999, p.694) stated that mental health education and training needed to "(i) be evaluated and (ii) target those clients most in need." The Mental Health Awareness training completes this task. It is very important that any customer with a possible mental health issue have a case manager who is capable of recognizing the signs and symptoms of the most common mental health issues.

Therefore, it is important for the Department of Workforce Solutions to train their workforce with the knowledge and skills imparted in the Mental Health Awareness trainings and evaluate the participants learning beyond Level I. This allows for a true assessment of whether their employees understand the "barriers to employment" that mental health issues present.

One of the best practices to assess Level II learning is the pre- and post test. Murk, Barrett II, and Atchade (2000) suggest the pre-test be completed before even attending the training to determine the skill levels of the participants. In this way, the trainer could adjust and direct their training to the level of the participants. Following Kirkpatrick's lead, the above authors have developed their own "Index for Training Success" model which is very similar to that of Kirkpatrick's Four Levels of Evaluation. The "Index for Success" model will be discussed further along with other evaluation models later in this section.

Training programs should be developed from the needs analysis, which drives the goals of the training and subsequently defines the methods of evaluation that should be used. Evaluation needs to be responsive to organizational changes. Guttentag, Kiresuk, Oglesby and Cahn (1975, p.19) state that researchers need to pay attention to the "quantification of values" when evaluating the training process. They have researched the evaluation of mental health training programs and state that generally the evaluation focuses on the program itself (Level I). In their book, Guttentag, Kiresuk, Oglesby and Cahn, cite E. A. Suchman (1967) to demonstrate the distinction between evaluation and evaluative research. Suchman states:

> Evaluation is a judgment of the value of the program, while (evaluative research) is the more formal scientific systematic use of research procedures for evaluation a program. Each type of evaluation is appropriate for some uses, and neither should be discounted as useless. However, both evaluation and evaluative

> research should be used in appropriate situations with appropriate interpretation and utilization of results (p. 27).

Evaluative research is a testing of the application of the knowledge. In evaluative research, the designs are essentially the same as for other quasi-experimental studies. The use of pre- and post-testing, control groups and assessing behavioral change are measures supported by Guttentag, Kiresuk, Oglesby and Cahn which support the work of Kirkpatrick.

Robinson and Robinson (1989) address the issue of the need to refocus evaluation from counting training activity to determining training's impact on the organization's business needs. Evaluating for effectiveness is a critical issue. It will give needed leverage for future training, help to measure business success, ability to learn from experience and develop better relationships with sponsors and clients. Outcome evaluation or data collection extended to include the measurement of such variables as program implementation, participant exposure to services, and participant characteristics expected as a result of training are necessary for effective evaluation (Lipsey, 2000).

When looking at evaluation, one needs to look at both summative and formative evaluation. Evaluation data at Kirkpatrick's Level I, II and III provide formative information about the design of the training program and the training implementation process. According to Long (1999), it is formative evaluation that tells you which elements of the training need to be adjusted to improve the bottom-line results of the training (Level IV). Summative evaluation focuses on the effectiveness of the training (Goldstein & Ford, 2002). The two sources vary in just where Level III evaluation

should be placed. Long feels Level III is part of formative evaluation and Goldstein and Ford put Level III under summative evaluation. Hale (2002) agrees with Goldstein and Ford. Hale expresses that the Kirkpatrick model is still valid and easy to explain. Hale states that when evaluating training you must look at three main points:

1. The expected behaviors, choices, or outputs you want to see back on the job so you can track their presence or absence.
2. The opportunities where people can exhibit the behavior, make the choice, or produce the output.
3. When and how to best measure (gather information about) the presence or absence of these behaviors or choices made.

Long (1999) emphasizes that a complete evaluation of training and development is imperative to prove bottom-line investments. He states that by using all four Kirkpatrick levels a manager can fully understand the value of training.

Alternative Evaluation Models:

Not everyone agrees that Kirkpatrick has the market on evaluation like Long, Hale or the other authors cited above. Paul Bernthal, manager of research at Development Dimensions International (DDI) believes that Kirkpatrick's classic model has done well, but has limited our thinking about evaluation and caused us to hinder meaningful evaluations (Abernathy, 2001). Other models would include Concept Mapping and Pattern Matching by Andersen Consulting Education along with the ever popular Six Sigma program. Phillips is world renown for his ROI Process which includes Kirkpatrick's Four Levels of Evaluation as part of the data collection.

The previously mentioned "Index for Training Success" (ITS) model was developed by Murk, Barrett II, and Atachade. The Index is to be used during planning to assess the potential success of the training and to identify areas where additional effort would promote improvement. The ITS is based on a set of six questions and their sub-questions that assist the trainer in quantitatively evaluating a training and assessing the chances for conducting a successful event. The six questions are (Murk, Barrett II & Atchade, 2000):

1. Who needs the training?
2. Why are participants attending?
3. When and where will the training take place?
4. What is to be learned?
5. How much will the training cost?
6. How will the training be evaluated?

Little of the Index is meant for post training but mainly used as a tool to develop marketing and sound principles of adult education for effective training and development.

Development Dimensions International (DDI) is a model by Paul Bernthal (Abernathy, 2001) that divides training results into two measurements: hard data and soft data. Hard data is a measurement of organizational performance, objective, easy to measure and transfer to monetary values. Examples of hard data are; output, quality, time and cost. Soft data is generally the measure of soft skills, subjective and more difficult to measure and transfer to monetary values. Examples of soft data are; work habits, work climate, attitudes, new skills, development, advancement and initiative. Bernthal believes that the main approach to training should be defined by the questions

you want to be answered, not a set of pre-existing outcomes. He suggests that one find out what your internal customers need to know and then develop training around those questions.

Concept Matching and Pattern Matching developed by Anderson Consulting Education (SenGupta, 1996) involves developing a concept map that eventually displays clusters of solutions. The work on the concept mapping technique is driven by first defining a focus statement that the key stakeholders feel is all encompassing of the project or training. A brainstorming session follows next to generate ways to arrive at the focus statement. From this point, the statements are sorted by likeness, rated and eventually form the clusters of like ideas/concepts. Pattern matching allows one to compare, both visually and statistically, two ratings from the concept map over time to evaluate the outcomes relative to the expectations. The results of the concept mapping help to identify issues and their relative importance while the pattern matching allows one to identify similarities and differences across groups.

Six Sigma was originally "named" at Motorola by a manager working to improve their manufacturing processes (George, 2002). It is a quality philosophy that uses customer-focused goals and measurements to drive continuous improvement throughout all levels of an organization to improve process and reduce variation. The goal is to develop processes that lead to about three defects per million. Six Sigma can use surveys to realign training programs but the major emphasis is on training not measurement.

The last model reviewed was Phillips' Return on Investment (ROI). Phillips' ROI process (Phillips, 1997) is used to calculate the return on investment of performance

solutions which can include training. There are four major parts to his model; evaluation planning, data collection, data analysis and reporting. The evaluation portion involves the development of the objectives of the solution and the evaluation plan. The data collection process includes Kirkpatrick's four levels put into Phillips' terminology. He uses Level I and II as his data collection during solution implementation and Level III and IV as his collection of data after the solution has been implemented. The next phase of the ROI model is data analysis. This phase consists of three major areas of analysis: defining the effects of the solution, converting the data to monetary value and calculating the return on investment. The reporting or final stage of his model is the generation of an impact study report. Phillips has created a technique that any industry can use to quantify training. But Jack Phillips does acknowledge that not all measures can or should be converted to monetary values. Some need to be reported as intangibles.

Summary

Kirkpatrick's Four Levels of Evaluation provided the evaluation model for this study. By using Kirkpatrick, the researcher was able to effectively assess Level II and Level III. The Kirkpatrick model allowed the researcher to show the effectiveness of the Mental Health Awareness training in positive gain of knowledge, skills or attitudes.

This study did not require analysis to the ROI financial level of Phillips' model. The Concept Mapping and Pattern Matching model would be ineffective due to the process requiring the input of the majority of key stakeholders in the development of a focus statement that would begin the model process. The DWD currently has its Project Management Tool (Department of Workforce Development, 2000) which utilizes the

necessary people in the training development process. The DDI model by Paul Bernthal (Abernathy, 2001) suggests that the training be developed by asking questions about what is needed of the customers, in this case, the workshop participants. The DWD needs to design its training programs by considering outcomes necessary for workshop participants to be informed. But, it would be difficult for the workshop participants to be able to identify all the technical details that each enhanced case management workshop presents.

Six Sigma is a quality management program that is a part of DWD's system wide training goal. But in the case of each individual training course offered, it is not possible to obtain a measurement of error because each person needing the assistance of W-2 is an individual who may present a multitude of "barriers to employment". The model most similar to that of Kirkpatrick is the "Index for Training Success" model. Kirkpatrick's model was chosen because this study wanted to focus on the level of learning gained and the transfer of that learning to the participant's job situation.

Therefore, Kirkpatrick's Four Levels of Evaluation provided the best way to evaluate the amount of learning that occurred, how many people were touched by it, and how frequently it impacted their quality of customer service. Level II evaluation gave the researcher a way to measure how much the participants learned in the training, whether the participants understood the mental health issues presented by role play and provided a way to measure the content validity of the training. Level III evaluation effectively provided a method to assess whether the concepts learned in the training were transferred

to participant job performance, to what extent that was happening and whether the content of the training was sufficient for the goals of the training to be reached.

Chapter III

Methodology and Approach

Introduction

A pilot study consisting of three separate survey instruments (Appendix A) was conducted. Two ten-statement pre-training and post-training self-assessment survey instruments were developed from the discussion statements contained in the Mental Health Awareness workshop materials. These two ten-statement survey instruments were given to the participants in three Mental Health Awareness workshops during the fourth quarter of 2001. A one month follow-up post-training self-assessment survey instrument was also developed and mailed to the workshop participants one month following their completion of the training. The one month follow-up survey was used to measure Kirkpatrick Level III evaluation in relation to the research objectives.

Thirty nine participants completed the on site pre-training self-assessment survey that measured their knowledge of and attitudes toward customers with mental health issues before taking the Mental Health Awareness workshop. Ninety-two percent of those participants completed the on site post-training self-assessment survey thus allowing measurement of Kirkpatrick Level II: "What knowledge was learned? What skills were developed or improved? What attitudes were changed?" (Kirkpatrick, 1998, p. 39). There was a 51% return rate from the participants on the one month follow-up post-self assessment survey.

The pilot study revealed that Level II and Level III learning occurred. There was an average gain in knowledge, skills or attitude between the pre- and post-training self-assessments (Level II). Kirkpatrick states:

> Level III evaluation determines the extent to which changes in behavior (on the job) occurs because of the training program. No final results, can be expected unless a positive change in behavior occurs. Therefore, it is important to see whether the knowledge, skills, and/or attitudes learned in the program transfer to the job. (Kirkpatrick, 1998, p. 57).

The pilot study showed a positive Level III evaluation had occurred as evidenced by the fact that 85% of the participants felt their attendance at the Mental Health Awareness workshop changed their assumptions about persons with mental illnesses in a positive way. The positive affects of the Mental Health Awareness workshop did not stop there. Ninety percent of the participants felt they increased their objective knowledge about mental illness in general.

Research Design

A quasi-experimental time-series design using a pilot study followed by more extensive research on a larger population was used in this study. The pilot study was designed to test the survey instrument for it's usefulness in achieving the research objectives addressed previously. Based on the pilot study it was determined that a number of changes needed to be made to the survey instruments. Four revisions were recommended and evaluated by Mr. Joseph Franklin, Research Analyst for the Office of

Institutional Research at the University of Wisconsin-Oshkosh, Ms.Gay Putsaver, Master of Arts in Sociology with an emphasis in Survey Research and Statistics from Northern Illinois University in DeKalb, Illinois, Ms. Catherine Lindsay, CCDET Enhanced Case Management coordinator, and David Johnson, PhD, Professor at University of Wisconsin Stout. The revisions included:

1. A change in how the demographic data would be collected.
2. The addition of two statements currently used in the Mental Health Awareness Workshop that were taken in part from the Cornell University's publication: Implementing the Americans with Disabilities Act: Reasonable Accommodations (Mental Health Awareness Trainer's Guide, September 1, 2001).
    a. People with a mental illness can control their illness and use it to suit their purposes.
    b. Only mental health clinicians can help rehabilitate individuals with a mental illness.
3. The wording of statement #10 was changed to "Medication can make an individual with mental illness normal and functional." for consistency in how the statements are worded.
4. A few other insignificant statement changes.

The study will analyze the survey data using Donald Kirkpatrick's Four Levels of Evaluation.

Level I:	Reaction.	The measure of how participants feel about the various aspects of a training program.
Level II:	Learning.	The measure of knowledge acquired, skills improved, or attitudes changed due to training.
Level III:	Behavior.	The measure of the extent to which participants change their on-the-job behavior because of training.
Level IV:	Results.	The final results that occurred because the participants attended the training.

This study will primarily focus on Level II and Level III evaluation. It is important to note that in order for proper evaluation to occur you need to always begin with Level I and sequentially move up through the remaining three levels. This is essential because each successive level serves as a base for the next level as the measure of training effectiveness becomes more rigorous (Kirkpatrick, 1998).

For the purposes of this study, it should be noted that Level I is currently measured by a survey administered on a PAR SCORE form developed for the Department of Workforce Solutions to be completed by all workshop participants who attend the multitude of courses they offer throughout the State of Wisconsin.

Level I evaluation gives immediate participant feedback on course content, physical environment of the training site, relevancy to the attendees work situation and the competency and delivery of the trainer. The Office of Institutional Research at the University of Wisconsin Oshkosh is contracted to compile the results of the PAR SCORE forms for each workshop. This evaluation is subsequently reviewed by the Department

of Workforce Solutions, the training unit and curriculum writers. This type of feedback leads to curriculum changes/revisions, site relocations and/or trainer assignments.

Concerning Level IV, Kirkpatrick states:

> It is difficult if not impossible to measure final results for programs on such topics as leadership, communication, motivation, time management, empowerment, decision making or managing change. We can state and evaluate desired behaviors, but the final results have to be measured in terms of improved morale or other nonfinancial terms (Kirkpatrick, 1998, pp. 23-24).

Data Collection

The revised survey instruments are contained in Appendix B. The 12 statement pre- and post-training self-assessment survey instruments were given on site to each participant at a Mental Health Awareness workshop during the first quarter of 2002. The survey statements were designed to assess the participant's knowledge about and attitudes toward their customers with a mental health issue. Each participant rated their current beliefs about each survey statement using a six-item Likert scale. The scale ranged from strongly disagree to strongly agree. The comparison of gain in knowledge, skills or attitudes would be used to assess Kirkpatrick Level II. The pre-training instrument also included demographic data that would be used to evaluate the participant responses in relation to the statements.

The workshop participants self-addressed an envelope that was used to send them the follow-up one month post-training self-assessment survey. This survey instrument was

designed to assess whether the participant had transferred any knowledge, skills or attitudes gained by attending the Mental Health Awareness workshop to their job behaviors (Kirkpatrick Level III). This survey also included demographic data that would be used later to analyze the participant responses and return rate data.

Data Analysis

The pre- and post-training self-assessment survey instrument results will be evaluated for positive percentage change in knowledge, skills or attitudes. This will show whether there has been a positive gain in immediate knowledge as a result of the workshop training (Kirkpatrick Level II).

The follow-up one month post-training self-assessment survey was mailed to all the Mental Health Workshop participants that completed the self-addressed envelope at the time of the workshop. The focus of the data collection from this survey was to demonstrate the attainment of a number of the aforementioned research objectives along with Kirkpatrick Level III analysis. The objectives to be demonstrated are:

1. whether a transfer of the learning from the workshop to the job situation occurred.
2. whether the workshop prompted the participants to continue their individual learning about mental health issues.
3. whether the participants were encouraged to become an advocate for customers with mental health issues.
4. whether the participants were encouraged to become an advocate for more professional training in their agency.

The demographic data collected from the pre-training survey and the follow-up one month post-training survey will allow the researcher to describe the participants and analyze the survey data with the demographic data.

Crosstabulation and chi-square analysis was conducted on selected demographic variables. The chi-square analysis shows that there is a significant difference between groups. However, it does not say what the difference is. The significance level of chi-square is a value of $P<0.05$ or less, which indicates there is at least a 95% chance that the results were not random. Each demographic was reduced to two groups, which is the simplest method of data reduction for a 2X2 crosstabulation. Frequencies and measures of central tendencies were used to identify the percent of variation in the pre- and post-training changes in knowledge, skills or attitudes. Paired T-test analysis was used to analyze whether there was a significant difference between the pre and post test means. The significance level for T-Tests is $P<0.05$.

Summary

By using Kirkpatrick's Levels I, II, and III evaluation on the Mental Health Awareness training workshops, the Department of Workforce Development will be able to assess the effectiveness of the training for the participants. The participants should show an immediate gain in knowledge about the barriers to employment that customers with a mental health issue may have along with a positive change in their attitudes on the job toward customers with mental health issues after attending the workshop.

The three survey instruments and subsequent data analysis will allow the Department of Workforce Development to prove the value of this and subsequently other training

workshops for W-2 employees. As a result of the statistical data produced, there will be evidence that the professional development activities for W-2 employees have a positive effect on the entire social service system in the State of Wisconsin.

Chapter IV

Findings and Analysis of Results

Introduction

A description of the demographic profile of the sample and the results from the data analysis pertaining to the survey statements are presented in this chapter. Results will be examined relative to Kirkpatrick's Level II and III evaluation. The pre- and post-training survey instruments will be used to analyze Level II. The follow-up one month post-training survey instrument will be used to analyze Level III.

Description of the Sample

During the first quarter of 2002, 104 participants attended the Mental Health Awareness Workshops throughout the State of Wisconsin. The pre- and post-training self-assessment survey instruments were administered at the time of the initial training. Ninety-five workshop participants completed the on site post-training self-assessment survey resulting in a 91% completion rate. Seventy-three participants responded to the follow-up one month post-training self-assessment survey instrument giving a 70% response rate.

The age range of the participants was age 22 to age 60, with a mean age of 42 years. The participants were employed in their current position an average of seven years with a broad spectrum of one to 33 years. On average, the participants had worked in the Social Services industry for 11 years. The remainder of the demographic data collected is shown in Tables 1 through 5 of Appendix C.

Analysis of Demographic Data:

In comparing the demographic data collected on the pre-training self-assessment survey with the follow-up one month post-training self-assessment survey, a number of conclusions can be drawn. Participants most likely to return the one month survey were male, had received either Aid for Families with Dependant Children (AFDC) or W-2 benefits in the past, had completed some college or higher educational level and worked for W-2, County Social Services or "Other" category agency. The participants employed as receptionists and social service aides were the only two groups with a 100% return rate on the one month post-training workshop survey.

Data Analysis of Level II Evaluation

In order to assess whether there was an immediate positive gain in knowledge, skills or attitudes as a result of the Mental Health Awareness workshop, a pre-training self-assessment and post-training self-assessment survey consisting of 12 identical statements was completed on site by the workshop participants. The survey instrument was designed to determine the participants increase in knowledge, skills or attitudes toward customers with a mental health issue. The results of the percent changes between the two survey instruments are contained on the following page in Table 6: Percent Changes in Pre- and Post-Training Self-Assessment Surveys.

Table 6.

Percent Changes in Pre- and Post-Training Self Assessment Surveys

Statement	% Disagree % Agree	Pre	Post	% Positive Change
1. People with mental illnesses are dangerous.	% Disagree % Agree	69.9 30.1	77.9 22.1	8.0
2. I am comfortable working with clients who have a mental illness.	% Disagree % Agree	16.3 83.7	12.6 87.4	4.3
3. Mental illness is common.	% Disagree % Agree	17.3 82.7	15.8 84.2	2.5
4. People with a mental illness cannot tolerate stress on the job.	% Disagree % Agree	59.6 40.4	73.7 26.3	14.1
5. A person can completely recover from a mental illness.	% Disagree % Agree	55.8 44.2	59.6 41.4	2.8
6. Mental illness is the same as mental retardation.	% Disagree % Agree	97.0 3.0	95.8 4.2	1.2
7. Mentally ill people cannot hold a job because they are unpredictable.	% Disagree % Agree	92.2 7.8	92.6 7.4	0.4
8. I wish I could give my clients with a mental illness to another worker.	% Disagree % Agree	76.7 23.2	78.9 21.1	2.1
9. Mental illness can strike an individual at any time in their lives.	% Disagree % Agree	4.8 95.2	5.3 94.7	0.5
10. Medication can make an individual with mental illness normal and functional.	% Disagree % Agree	15.4 84.6	20.0 80.0	4.6
11. People with a mental illness can control their illness and use it to suit their purpose.	% Disagree % Agree	74.0 26.0	67.4 32.6	6.6
12. Only mental health clinicians can help rehabilitate individuals with a mental illness.	% Disagree % Agree	73.1 26.9	90.5 9.5	17.4

Table 6 showed the results of the pre-training and post-training self-assessment surveys and the percent changes. The percent changes represent a positive reaction by the participants to most of the statements in the survey indicating an immediate overall gain in knowledge, skills or attitudes concerning customers with a mental health issue.

Statistical Analysis Related to Demographic Variables and Level II

Demographic variables were further analyzed by use of crosstabulation, chi-square and T-Tests to determine statistical significance of the survey results in relation to Kirkpatrick Level II evaluation.

Crosstabulations were performed in the following five categories to assess the significance of their parameters on the data. Crosstabulations produce a statistic called chi-square. The chi-square states that there is a significant difference between groups. However, it does not say what that difference is. The significance level of chi-square is a value of $P<0.05$ or less, which indicates there is at least a 95% chance that the results were not random. Each demographic was reduced to two groups, which is the simplest method of data reduction for a 2x2 crosstabulation. The five demographic categories are identified below:

1. Sex
    a. Group one: Male
    b. Group two: Female
2. Age
    a. Group one: 35 years of age or less
    b. Group two: 36 years of age or older

3. Recipient of AFDC (Aid for Families with Dependant Children or W-2 (Wisconsin Welfare to Work) benefits
    a. Group one: Yes
    b. Group two: No
4. Educational Level
    a. Group one: GED, High School, Technical College, some College
    b. Group two: Bachelor's Degree or higher
5. Years in current position
    a. Group one: 5 years or less
    b. Group two: 6 years or more

After performing chi-square tests using the above parameters against each statement in the pre- and post-training self-assessment survey, only three showed significance;

Age with Statement One:

I believe people with a Mental Health Illness are dangerous.

Level of Education with Statement Nine:

Mental Illness can strike an individual at any time in their lives.

Received AFDC or W-2 benefits with Statement Eight:

I wish I could give my clients with a Mental Illness to another worker.

Tables 7 through 9 below show the results of the Crosstabulations for the above mentioned groups.

Table 7.

Crosstabulation of Age with Statement Seven

Age * Statement 1 (S1): I believe people with Mental Health Illnesses are dangerous.

Crosstabulation

		S1		Total
		disagree	agree	
Age				
35 or younger	Count	17	14	31
	% within Age	54.8%	45.2%	100.0%
	% within S1	25.0%	46.7%	31.6%
	% of Total	17.3%	14.3%	31.6%
36 or older	Count	51	16	67
	% within Age	76.1%	23.9%	100.0%
	% within S1	75.0%	53.3%	68.4%
	% of Total	52.0%	16.3%	68.4%
Total	Count	68	30	98
	% within Age	69.4%	30.6%	100.0%
	% within S1	100.0%	100.0%	100.0%
	% of Total	69.4%	30.6%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.509	1	.034

Statement one on the survey (see Table 6), “People with a mental illness are dangerous”, showed that participants who were age 36 or older were three times more likely to disagree with this statement. That information suggests that with age may also come more knowledge or understanding of individuals who suffer from a mental illness.

Table 8.

Crosstabulation of Level of Education with Statement Nine.

Level of Education* Statement 9 (S9): Mental Illness can strike an individual at any time in their lives.

Crosstabulation

		S9		Total
		disagree	agree	
Tech or less	Count		46	46
	% within HEC		100.0%	100.0%
	% within S9		47.9%	47.9%
	% of Total		45.5%	45.5%
deg	Count	5	50	55
	% within HEC	9.1%	90.9%	100.0%
	% within S9	100.0%	52.1%	54.5%
	% of Total	5.0%	49.5%	54.5%
Total	Count	5	96	101
	% within HEC	5.0%	95.0%	100.0%
	% within S9	100.0%	100.0%	100.0%
	% of Total	5.0%	95.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.400	1	.036

The results on statement nine of the survey (see Table 6), “Mental Illness can strike an individual at any time in their lives”, shows that there is a significant difference in the views of our two educational groups P<0.036).

Table 9.

Crosstabulation of Past Recipient of AFDC or W-2 benefits with Statement Eight

Received Aid for Families with Dependant Children (AFDC) or Wisconsin Welfare to Work (W-2)* Statement 8 (S8): I wish I could give my clients with a Mental Illness to another worker.

Crosstabulation

		S8		
		disagree	agree	Total
REC yes	Count	12		12
	% within REC	100.0%		100.0%
	% within S8	15.8%		12.1%
	% of Total	12.1%		12.1%
no	Count	64	23	87
	% within REC	73.6%	26.4%	100.0%
	% within S8	84.2%	100.0%	87.9%
	% of Total	64.6%	23.2%	87.9%
Total	Count	76	23	99
	% within REC	76.8%	23.2%	100.0%
	% within S8	100.0%	100.0%	100.0%
	% of Total	76.8%	23.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.132	1	.042

Statement eight on the survey (see Table 6), "I wish I could give my clients with a mental illness to another worker", revealed interesting results when the crosstabulations were performed. All of the participants who had received AFDC or W-2 benefits in the past disagreed with this statement, while only 73.6% of participants who have not been personally involved with either system disagreed with this statement. This suggests that

participants in the Mental Health Awareness workshop who have been recipients of AFDC or W-2 may be more sympathetic to individuals with a mental health issue.

T-Test Results:

To further analyze the administration of the pre-and post-training self-assessment survey it was decided to do T-Tests. A T-Test is done to determine if there is a significant difference between pre and post means. T-Tests were performed on statements one through twelve. The significance level for T-Tests is the same as that for chi-square tests: $P<0.05$. Table 10: T-Test Group Statistics, shows the means for the pre- and post-training self-assessment survey statements one through twelve.

Table 10.

T-Test Group Statistics

	TYPE	N	Mean	Std. Deviation
S1	pre	103	2.75	1.03
	post	95	2.65	1.16
S2	pre	104	4.48	1.05
	post	95	4.51	1.17
S3	pre	104	4.44	1.06
	post	95	4.75	1.31
S4	pre	104	3.19	1.15
	post	95	2.73	1.23
S5	pre	104	3.32	1.32
	post	94	3.10	1.33
S6	pre	102	1.35	.86
	post	95	1.34	.83
S7	pre	104	1.88	.97
	post	95	1.99	1.13
S8	pre	103	2.52	1.24
	post	95	2.41	1.19
S9	pre	104	5.05	.93
	post	95	5.26	.94
S10	pre	104	4.51	1.15
	post	95	4.26	1.23
S11	pre	104	2.61	1.27
	post	95	2.76	1.36
S12	pre	104	2.75	1.29
	post	95	2.06	1.02

The results show that only two statements on the survey had significant T-Test values;

Statement 12: Only mental health clinicians can help rehabilitate individuals with a mental illness.

Statement 4: People with a mental illness cannot tolerate stress on the job.

Statement 12 T-Test results show a significance level of <0.000. This indicates that nearly all the time in any population this difference would occur following the same Mental Health Awareness training. Results also showed that statement 4 had a significance level of <0.006, which means the same is true of this statement as well. The T-Test for Equity of Means results are in Table 11.

Table 11.

T-Test Results for Equity of Means

		t	df	Sig. (2-tailed)
S1	Equal variances assumed	.610	196	.543
S2	Equal variances assumed	-.155	197	.877
S3	Equal variances assumed	-1.811	197	.072
S4	Equal variances assumed	2.759	197	.006
S5	Equal variances assumed	1.177	196	.240
S6	Equal variances assumed	.133	195	.894
S7	Equal variances assumed	-.703	197	.483
S8	Equal variances assumed	.659	196	.511
S9	Equal variances assumed	-1.626	197	.106
S10	Equal variances assumed	1.461	197	.146
S11	Equal variances assumed	-.818	197	.414
S12	Equal variances assumed	4.141	197	.000

These results show no significant difference in the rest of the questions, which in essence means that the training only verified the participant's initial observations of people with mental illnesses.

Data Analysis of Level III Evaluation

Kirkpatrick's Level III evaluation consists of measuring whether there was any transfer of the information learned at the training to the workplace. Kirkpatrick states: "When you evaluate change in behavior, you have to make important decisions: when to evaluate, how often to evaluate, and how to evaluate."(Kirkpatrick, 1998, p. 49). The four guidelines that this study followed were:

1. Allow time for behavior change to take place.
2. Evaluate both before and after the program.
3. Survey the trainees.
4. Get 100 percent response or a sampling.

For the purposes of this study, a self-assessment survey was mailed out one month following the participant's attendance at the Mental Health Awareness training. This method was chosen for the following reasons:

1. The distance between participant job sites.
2. Ease of collection.
3. The ability of the participant to remain anonymous while still allowing demographic collection.

Seventy percent of the follow-up one month post-training surveys were returned. The survey instrument was designed to measure the long-term effects of the knowledge, skills or attitude changes gained at the initial Mental Health Awareness training. Table 12: Evaluation Table for One Month Post-Training Assessment Survey contains the percent of agreement or disagreement with how the participants viewed the long-term effect of the workshop on their knowledge, attitudes or behavior.

Table 12.

Evaluation Table for One Month Post-Training Assessment Survey

Statement: My attendance at the Mental Health Awareness Training:		
1. Changed my assumptions about people with a mental illness.	% Disagree % Agree	34.3 65.7
2. Added to my objective knowledge about mental illness.	% Disagree % Agree	0.0 100.0
3. Improved my interaction with clients with a mental illness.	% Disagree % Agree	11.1 88.9
4. Motivated me to gather more information about mental illnesses.	% Disagree % Agree	20.5 79.5
5. Affected my feelings in a positive manner about my clients with a mental illness.	% Disagree % Agree	9.6 90.4
6. Motivated me to seek out more resources for my clients with mental illnesses.	% Disagree % Agree	17.8 82.2
7. Encouraged me to become an advocate for more professional training in my agency.	Yes No	47.1 51.4
8. I have serviced a client(s) with a mental illness since attending the Mental Health Issues Workshop.	Yes No	74.6 25.4

In evaluating the percentage differences, it is apparent that there was a definite transfer in learning by the workshop participants to their worksite and more importantly, to their work habits. Of the participants who attended the Mental Health Awareness training in the first quarter of 2002, three-fourths had serviced a client with a mental illness in the first month following the training. This allows the study to add validity to the survey results.

The validity of a training program can be measured by performance in the transfer or on-the-job setting (Goldstein & Ford, 2002). This is known as transfer validity which indicates whether the training made a difference in very specific ways. The fact that three-fourths of the workshop participants serviced a client with a mental health issue combined with the fact that 89% of the participants felt that their attendance at the training improved their own interaction with their clients with a mental health issue proves transfer validity. In addition, 94% also expressed that they treated their clients with a mental health issue in a more positive manner.

One can see that 65.7% of the workshop participants felt that the Mental Health Awareness training changed their assumptions about people with mental illnesses. Many of the participants wrote that they felt they had already had a good understanding of people with mental illnesses through either personal experience or previous knowledge. Quotes from participants include: “I have chronic unipolar depression for over 35 years. This background led me to do considerable reading on my own”, “not just from this training, experience from family members” and “I have worked with individuals with mental illness for 25 years and case managed them for 16 years”. Even more impressive

is the fact that 100% of the participants responded that the training added to their objective knowledge about mental illness. It was encouraging to note that 82.2% of the participants were motivated to seek out more resources for their clients while 79.5% went on to gather more information about mental illnesses.

It was a bit discouraging that only 51.4% of the respondents on the one month post-training self-assessment survey indicated that they became pro-active in their agencies for more professional training. This could be due to the fact that 24 contact hours of training are required by the State, of which 12 contact hours must be in the area of professional training, so the participants felt that professional training is readily available.

Statistical Analysis Related to Demographic Variables and Level III

Crosstabulation was performed with the one-month post-self-assessment survey in the same five demographic categories that were developed for the pre- and post-training self-assessment to further assess the significance of the Level III evaluation.

After performing chi-square tests on the above parameters against the eight statements of the one-month post-training self-assessment survey only two categories demonstrated significant data. They were gender and whether a participant had received AFDC or W-2 benefits in their past. The results of the crosstabulation and chi-square data are contained in the following two tables: Table 13 and Table 14.

Table 13.

Crosstabulation of Gender with Statement Five.

Gender * Statement 5 (S5): My attendance at the Mental Health Awareness Workshop training affected my feelings in a positive manner about my clients with a mental illness.

Crosstabulation

		S5		Total
		disagree	agree	
Gender : Male	Count	3	9	12
	% within Gender	25.0%	75.0%	100.0%
	% within S5	42.9%	14.1%	16.9%
	% of Total	4.2%	12.7%	16.9%
Female	Count	4	55	59
	% within Gender	6.8%	93.2%	100.0%
	% within S5	57.1%	85.9%	83.1%
	% of Total	5.6%	77.5%	83.1%
Total	Count	7	65	71
	% within Gender	9.9%	90.1%	100.0%
	% within S5	100.0%	100.0%	100.0%
	% of Total	9.9%	91.1%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.725	1	.054

Statement 5: “My attendance at the Mental Health Awareness training affected my feelings in a positive manner about my clients with a mental illness.” had a chi-square value of $P<0.054$. This shows that females were much more likely than males to agree with this statement.

Table 14.

Crosstabulation of Past Recipient of AFDC or W-2 benefits with Statement One.

Received AFDC or W-2* Statement (S1): My attendance at the Mental Health Awareness Workshop training changed my assumptions about people with a mental illness.

Crosstabulation

		S1		
		disagree	agree	Total
REC				
Yes	Count	4	1	5
	% within REC	80.0%	20.0%	100.0%
	% within S1	16.7%	2.1%	6.9%
	% of Total	5.6%	1.4%	6.9%
no	Count	20	47	67
	% within REC	29.9%	70.1%	100.0%
	% within S1	83.3%	97.9%	93.1%
	% of Total	27.8%	65.3%	93.1%
Total	Count	24	48	72
	% within REC	33.3%	66.7%	100.0%
	% within S1	100.0%	100.0%	100.0%
	% of Total	33.3%	66.7%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.266	1	.022

A chi-square of P<0.022 for statement one on the survey, “My attendance at the Mental Health Awareness Training changed my assumptions about people with a mental illness”, show that participants who received either AFDC or W-2 benefits in their lifetime were

more likely to disagree with this statement. If you combine this knowledge along with the chi-square results of statement eight (I wish I could give my clients with a mental illness to another worker.) on the pre- and post-training self-assessment survey, you can conclude that past recipients of either AFDC or W-2 are more compassionate with clients with a mental health illness.

Chapter V

Summary, Conclusions and Recommendations

Introduction

It is becoming increasingly important for public sector businesses and organizations to prove their effectiveness in order to receive continued funding. The Division of Workforce Solutions (DWS) is in this position. They currently require their employees to annually attend 12 hours of professional development training. Professional development training can be completed in any of three areas: enhanced case management, technical skills or interpersonal skills. The purpose of the professional development training offerings is to provide a means for the employee to go beyond their current job skills in order to enable them to better understand and service Wisconsin Welfare to Work customers with "barriers to employment".

There is currently no system in place in the Division of Workforce Solutions to evaluate the immediate or long-term effect of their professional development employee training requirements. The State does an evaluation of all programs which only assesses the participant satisfaction with the training, training site and trainer, but this is not enough to prove training effectiveness and utilization.

The researcher chose to use Level II and Level III of Kirkpatrick's Four Levels of Evaluation. Level II evaluation demonstrates the immediate gain in knowledge, skills or attitudes as a result of attendance at the training workshop. Level III evaluation allows for the assessment of the transfer of the knowledge, skills or attitude gained to the participant job-site at a later date, usually one to three months after the training event.

Summary of Study Procedures

A review of literature was conducted to obtain information about various training evaluation models. Kirkpatrick's Four Levels of Evaluation was selected for this study because it provided the best model to evaluate the amount of learning that took place (Level II) and how much of that learning was transferred to improve performance on the job site by each participant (Level III).

The researcher used a number of survey instruments to gather the necessary data to accomplish the objectives of the study:

1. To determine the participant understanding of Mental Health Issues before the training, Kirkpatrick Level II.
2. To determine the participant understanding of Mental Health Issues immediately after the training, Kirkpatrick Level II.
3. To measure the long-term effects of the knowledge gained during the training one month after the participants have attended the training, Kirkpatrick Level III.

Pre- and post-training self-assessment survey instruments were given to all Mental Health Awareness workshop participants during the first quarter of 2002. This survey instrument allowed the researcher to obtain data as to whether there was an immediate gain in knowledge, skills or attitude due to the training session itself. The data collected were used for both assessing the percent change in knowledge, skills or attitude gained along with statistical analysis.

A one month follow-up post-training self-assessment survey was sent to workshop participants to evaluate the effectiveness of the training (Level III). The survey instrument was designed to obtain data in the following four areas of concern:

1. whether a transfer of the learning from the workshop to the job situation occurred.
2. whether the workshop prompted the participants to continue their individual learning about mental health issues.
3. whether the participants were encouraged to become an advocate for customers with a mental health issue.
4. whether the participants were encouraged to become an advocate for more professional training in their agency.

Data were collected from the three survey instruments for further statistical analysis such as; crosstabulation, chi-square and T-Tests. Demographic data were included on the pre-training and follow-up one month post-training surveys to evaluate participant responses in relation to the survey statements.

The data were easily collected from the 104 participants who attended Mental Health Awareness workshops during the first quarter of 2002. Of the 104 pre-training surveys completed there was a 91% completion on the post-training survey and a 71 % return on the follow-up one month post-training self-assessment.

Conclusions and Implications

In order to demonstrate an immediate gain in knowledge, skills or attitude from the workshop attendees, a percentage comparison of the participant responses to the identical

twelve statement pre- and post-training survey instruments were made. The most notable positive percent changes occurred with statements:

1. "People with a mental illness are dangerous" showed an eight percent positive change.
2. "People with a mental illness cannot tolerate stress on the job" showed a 14.1% positive change.
3. "Only mental health clinicians can help rehabilitate individuals with a mental illness" showed a 17.4% positive change.

The positive percent changes in all 12 statements on the survey indicate an immediate overall gain in knowledge, skills or attitude.

After performing crosstabluations, chi-square and T-tests, three statements on the pre- and post-training survey revealed a significant difference between the demographic groups. The demographic groups showing significance were age, level of education and whether a participant had been a previous recipient of AFDC or W-2 benefits. The age group 36 years of age or older felt that their customers with a mental illness were less dangerous than the younger training participants. The more educated the participant the more likely they were to believe that mental illness can strike an individual at any age. Those participants who had received public assistance in the past were also more willing to work with customers with a mental illness.

In reviewing Level III data from the follow-up one month post-training survey designed to assess the participants transfer of the knowledge, skills or attitude they gained at the workshop to their worksite, it was apparent that there was a definite transfer.

Sixty-five percent of the workshop participants indicated their assumptions about customers with a mental health issue had changed for the positive. Most impressive was the fact that 100% of the participants indicated the training increased their objective knowledge.

After performing the statistical analysis of the one month post-training survey two demographic groups proved to be statistically significant. They were gender and once again, the reception of either AFCD or W-2 assistance in the past. Females were more likely than males to feel that their feeling were affected in a positive manner after the workshop and past recipients of public assistance felt their perceptions about customers with a mental health issue was changed for the positive.

Overall, the results of the research were consistent with the expectations of the study. There are a number of variables that need to be considered in this study that were not under the control of the researcher:

1. Difference in trainers throughout the State.
2. Attitudes of the participants toward the training or their choice in attendance, emotional state or perceived knowledge.
3. Location of the workshop in the State due to the imbalance of W-2 customer location.
4. Whether the workshop participants will have direct contact with customers with the topic issue.
5. W-2 policy and supervisor variation.
6. Knowledge of the participants before the training about the subject matter.

Recommendations

The researcher recommends that Kirkpatrick's Level II and Level III evaluation be used by the State of Wisconsin Division of Workforce Solutions to position them for further funding for training programs across all of their training programs. Due to the results of the study presented, it is apparent that the enhanced case management training on Mental Health Awareness had a positive impact on the job performance and further outreach of the participants. Once the knowledge, skills and attitudes of each workshop offered are identified, DWS can support the continuation of its training initiatives.

To add to the post-training evaluation, it would be beneficial to interview the supervisors of the workshop participants as this study asked for a self-assessment. This information would possibly present a truer picture of participant post-training activity, as well as allow DWS to receive a better picture of individual office policies and procedures.

Kirkpatrick's Level II and III evaluation model is versatile enough to be used with all three types of training that the Department of Workforce Development presents to its employees and allows for evaluation and statistical evaluative research to be performed. An ongoing evaluation process is an excellent way to serve the interests of the customers, trainees and trainers. Long-term assessments show how well the learning objectives have been achieved.

Overall, training the workforce represents a considerable challenge but future training needs to be highly focused on particular target groups with an imperative to train workers with skills in assessment for "barriers to employment" with a sound research basis.

References

Abernathy, D. J. (2001). Thinking outside the evaluation box. *ASTD's Virtual Community,* Retrieved September10, 2002 from http://www.astd.org.

Cohen, S. P. (1999, July). Am I my trainee's keeper? *Training, v36i7,* 76.

Department of Workforce Development. (2000, August). *DES project management tool.* Madison: Wisconsin.

Department of Workforce Development. (2001). *Quarterly training preview v5,i3.* Madison: Wisconsin.

George, D., & Mallery, P. (2001). *SSPS for windows step by step: A simple guide and reference 10.0 update* (*3rd ed*.)*.* Needham Heights, MA: Allyn & Bacon.

George, M. L. (2002). *Lean six sigma: Combining six sigma quality with lean production speed.* New York: McGraw Hill.

Goldstein, I. L., & Ford, J. K. (2002). *Training in organizations: Needs assessments, development and evaluation* (*4th ed*.). Belmont, California: Wadsworth Group.

Guttentag, M., Kiresuk, T., Oglesby, M., & Cahn, J. (1975). *The evaluation of training in mental health.* New York: Behavioral Publications, Inc.

Hale, J. (2002). *Performance-based evaluation: Tools and techniques to measure the impact of training.* San Francisco: Jossey Bass Publishers.

Iverson, R., McLeod, C., & Erwin. (1996, March). The role of employee commitment and trust in service relationships. *Marketing Intelligence and Planning*, *14,* 36-44.

Kirkpatrick, D. L. (1971). *A practical guide for supervisory training and development.* Philippines: Addison Wesley Publishing.

Kirkpatrick, D. L. (1975). *American society for training and development: Evaluating training programs*. Alexandria, VA: ASTD.

Kirkpatrick, D. L. (1998). *Evaluating training programs: the four levels (2nd ed.).* San Francisco: Berrett-Koehler Publishers, Inc.

Kirkpatrick, D. L. (1996). Great ideas revisited: Techniques for evaluating training programs. *Training and Development, 50* (1), 54-60.

Kirkpatrick, D. L. (1960b). Techniques for evaluating training programs. *Journal for the American Society for Training Directors, 14*, 28-32.

Lambert, G., & Gournay, K. (1999). Training for the mental health workforce: a review of developments in the United Kingdom. *Australian and New Zealand Journal of Psychiatry, 33,* 694-700.

Lipsey, M. W. (2000). Evaluation methods for social intervention. *Annual Review of Psychology 2000.* Retrieved March 31, 2001 from http://www.findarticles.com

Long, L. N. (1999, Nov/Dec). ROI: capturing the big picture. *Technical Training,* 31-33.

Mental Health Awareness Trainer's Guide. (2001, September 1). Wisconsin Department of Workforce Solutions, 9.

Murk, P. J., Barrett II, A. J., Atchade, P. J. (2000). Diagnostic techniques for training and education: Strategies for marketing and economic development. *Economic Development Review, Summer 2000, v.17,i1,* 69-79.

Phillips, J. J. (1997). *Return on investment in training and performance improvement programs.* Burlington, MA: Butterworth-Heinemann.

Phillips, J. J. The ROI process. *Jack Phillips Center for Research.* Retrieved September 10, 2002 from http://www.franklincovey.com/jackphillips/about

Richardson, L. S. (1998, September). Creating value with a training program. *Employee Benefits Journal, v23,i3*, 6-8.

Robinson, D.G., & Robinson, J.C. (1989). *Training for impact, How to link training to business needs and measure results.* San Francisco: Jossey-Bass Publishers.

SenGupta, S. (1996). Staff concept mapping and pattern matching in integrated mental health service delivery. *Concept Systems, Inc.* Retrieved November 10, 2002 from http://www.conceptmap.com/papers/paperusr/sengupta/aea96.htm

Training and Development. (2002, August). News you can use. *Training and Development,* 12-13.

APPENDIX A

Pilot Study Survey Instruments

Pre–Training Self-Evaluation

Please rate the following statements according to your current beliefs using the scale below:

A – Strongly Disagree B – Somewhat Disagree C – Agree D – Somewhat Agree E – Strongly Agree

I believe people with Mental Health Illnesses are dangerous.	A B C D E
I am uncomfortable working with customers with Mental Health Illnesses.	A B C D E
Mental Illness is uncommon.	A B C D E
People with Mental Health Illnesses cannot tolerate stress on the job.	A B C D E
You can recover completely from a Mental Illness.	A B C D E
Mental Illness is the same as Mental Retardation.	A B C D E
Mentally ill people are unpredictable and therefore cannot hold a job.	A B C D E
I wish I could give my customers with a Mental Illness to another worker.	A B C D E
Mental Illness can strike an individual at any time in their lives.	A B C D E
Medication can make an individual with mental illness normal and functional	A B C D E

Demographics: _____

Age: _____ Sex: M___ F___

Current Position Title: _____

Years in this position _____

Do you work with a: W-2 Agency ____
County Social Services _____
Other _____

How many years have you worked in the Social Services field? _____

Have you ever received AFDC or W-2 services? Yes ___ No ___

Highest education completed: GED ___
High School ___
Some College ___
Technical School ___
Bachelor's Degree ___
Post – Bachelor's Degree ___

Post-Training Self-Evaluation

Please rate the following statements according to your current beliefs using the scale below:

A – Strongly Disagree B – Somewhat Disagree C – Agree D – Somewhat Agree E – Strongly Agree

I believe people with Mental Health Illnesses are dangerous.	A B C D E
I am uncomfortable working with customers with Mental Health Illnesses.	A B C D E
Mental Illness is uncommon.	A B C D E
People with Mental Health Illnesses cannot tolerate stress on the job.	A B C D E
You can recover completely from a Mental Illness.	A B C D E
Mental Illness is the same as Mental Retardation.	A B C D E
Mentally ill people are unpredictable and therefore cannot hold a job.	A B C D E
I wish I could give my customers with a Mental Illness to another worker.	A B C D E
Mental Illness can strike an individual at any time in their lives.	A B C D E
Medication can make an individual with mental illness normal and functional	A B C D E

MENTAL HEALTH ISSUES POST ASSESSMENT SURVEY

Please write the appropriate response according to the scale below:

A–Strongly Disagree B–Disagree C-Somewhat Disagree D-Somewhat Agree E-Agree F-Strongly Agree

My attendance at the Mental Health Issues workshop training:

- Changed my assumptions about people with a mental illness. _____
- Added to my objective knowledge about mental illness. _____
- Improved my interaction with clients with a mental illness. _____
- Motivated me to gather more information about mental illnesses. _____
- Affected my feelings in a positive manner about my clients with a mental illness. _____
- Motivated me to seek out more resources for my clients with mental illnesses. _____

Please circle the appropriate response:

- Encouraged me to become an advocate for more professional training in my agency. Y N
- I have serviced a client(s) with a mental illness since attending the Mental Health Issues Workshop. Y N

Demographics

Age: _____ Sex: M___ F___ Years in present position_____

How many years have you worked in the Social Services field? _____

Have you ever received AFDC or W-2 services? Yes ___ No ___

Do you work for a:

W-2 Agency __
DVR __
County Social Services __
Tribal Social Services __
Other_____

Current Position Title:

Case Manager _____
Child Care Coordinator _____
Economic Support Specialist _____
Employment Specialist ____
Financial Employment Planner_____
Income Maintenance Worker _____
Receptionist _____
Resource Specialist _____
Screener _____
Social Service Aide _____
Supervisor _____
Other _____

Thank you for taking the time to complete this survey.
Please return the survey in the enclosed pre-addressed, stamped envelope.

APPENDIX B

Field Study Survey Instruments

MENTAL HEALTH ISSUES PRE-TRAINING SELF EVALUATION SURVEY

Please rate the following statements according to your current beliefs using the scale below:

A–Strongly Disagree B–Disagree C-Somewhat Disagree D-Somewhat Agree E-Agree F-Strongly Agree

People with mental illnesses are dangerous.	A B C D E F
I am comfortable working with clients who have a mental illness.	A B C D E F
Mental illness is common.	A B C D E F
People with a mental illness cannot tolerate stress on the job	A B C D E F
A person can completely recover from a mental illness.	A B C D E F
Mental illness is the same as mental retardation.	A B C D E F
Mentally ill people cannot hold a job because they are unpredictable.	A B C D E F
I wish I could give my clients with a mental illness to another worker.	A B C D E F
Mental illness can strike an individual at any time in their lives.	A B C D E F
Medication can make an individual with mental illness normal and functional.	A B C D E F
People with a mental illness can control their illness and use it to suit their purposes.	A B C D E F
Only mental health clinicians can help rehabilitate individuals with a mental illness.	A B C D E F

Demographics

Age: _____ Sex: M___ F___ Years in present position_____

How many years have you worked in the Social Services field? _____

Have you ever received AFDC or W-2 services? Yes ___ No ___

Highest Education Completed:
GED___
High School ___
Some college ___
Tech School ___
Bachelor's Degree___
Post-Bachelor's Degree___

Do you work for a:
W-2 agency___
DVR___
County Social Services___
Tribal social Services___
Other___

Current Position Title:
Case Manager _____
Child Care Coordinator _____
Economic Support Specialist _____
Employment Specialist ____
Financial Employment Planner_____
Income Maintenance Worker _____
Receptionist _____
Resource Specialist _____
Screener _____
Social Service Aide _____
Supervisor _____
Other _____

MENTAL HEALTH ISSUES POST-TRAINING SELF EVALUATION SURVEY

Please rate the following statements according to your current beliefs using the scale below:

A–Strongly Disagree B–Disagree C-Somewhat Disagree D-Somewhat Agree E-Agree F-Strongly Agree

- People with mental illnesses are dangerous. A B C D E F
- I am comfortable working with clients who have a mental illness. A B C D E F
- Mental illness is common. A B C D E F
- People with a mental illness cannot tolerate stress on the job. A B C D E F
- A person can completely recover from a mental illness. A B C D E F
- Mental illness is the same as mental retardation. A B C D E F
- Mentally ill people cannot hold a job because they are unpredictable. A B C D E F
- I wish I could give my clients with a mental illness to another worker. A B C D E F
- Mental illness can strike an individual at any time in their lives. A B C D E F
- Medication can make an individual with mental illness normal and functional. A B C D E F
- People with a mental illness can control their illness and use it to suit their purposes. A B C D E F
- Only mental health clinicians can help rehabilitate individuals with a mental illness. A B C D E F

MENTAL HEALTH ISSUES POST ASSESSMENT SURVEY

Please write the appropriate response according to the scale below:

A–Strongly Disagree B–Disagree C-Somewhat Disagree D-Somewhat Agree E-Agree F-Strongly Agree

My attendance at the Mental Health Issues workshop training:

- Changed my assumptions about people with a mental illness. _____
- Added to my objective knowledge about mental illness. _____
- Improved my interaction with clients with a mental illness. _____
- Motivated me to gather more information about mental illnesses. _____
- Affected my feelings in a positive manner about my clients with a mental illness. _____
- Motivated me to seek out more resources for my clients with mental illnesses. _____

Please circle the appropriate response:

Encouraged me to become an advocate for more professional training in my agency. Y N

I have serviced a client(s) with a mental illness since attending the Mental Health Issues Workshop. Y N

Demographics

Age: _____ Sex: M___ F___ Years in present position_____

How many years have you worked in the Social Services field? _____

Have you ever received AFDC or W-2 services? Yes ___ No ___

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W-2 Agency __
DVR __
County Social Services __
Tribal Social Services __
Other_____

Current Position Title:

Case Manager _____
Child Care Coordinator _____
Economic Support Specialist _____
Employment Specialist ____
Financial Employment Planner_____
Income Maintenance Worker _____
Receptionist _____
Resource Specialist _____
Screener _____
Social Service Aide _____
Supervisor _____
Other _____

Thank you for taking the time to complete this survey.
Please return the survey in the enclosed pre-addressed, stamped envelope.

APPENDIX C

Demographic Characteristics of Study Participants

Demographic Characteristics of Study Participants

Table 1. Gender Characteristics

Gender	Pre-training survey	One month Post survey
Male	15	12
Female	87	60

Table 2. Past recipient of AFDC or W-2

15. Received AFDC or W-2	Pre-training survey	One month post survey
16. Yes	12	5
No	88	68

Table 3. Education Level

Highest Education Completed	Pre-training Survey	One month Post survey
GED	2	1
High School	12	5
Some College	19	12
Technical School	13	11
Bachelor's Degree	43	35
Post-Bachelor's Degree	12	8

Table 4. Current Place of Employment

Place of Employment	Pre-training survey	One month post-survey
W-2 Agency	32	23
Division of Vocational Rehabilitation	1	0
County Social Services	52	39
Tribal Social Services	1	0
Other	13	8

Table 5. Position Title

Current Position Title	Pre-training survey	One month post-survey
Case Manager	28	19
Child Care Coordinator	2	0
Economic Support Specialist	12	18
Employment Specialist	0	2
Financial Employment Planner	16	4
Income Maintenance Worker	0	1
Receptionist	7	7
Resource Specialist	2	3
Screener	4	1
Social Service Aide	1	1
Supervisor	8	5
Other	21	11